BEST AVAILABLE COPY

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property **Organization**

International Bureau





(43) International Publication Date 9 September 2005 (09.09.2005)

PCT

(10) International Publication Number WO 2005/084041 A2

(51) International Patent Classification⁷: H04L 12/56

H04Q 3/00,

(21) International Application Number:

PCT/GB2005/000633

(22) International Filing Date: 21 February 2005 (21.02.2005)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

0404196.8

25 February 2004 (25.02.2004) GB

0406513.2 .23 March 2004 (23.03.2004) GB

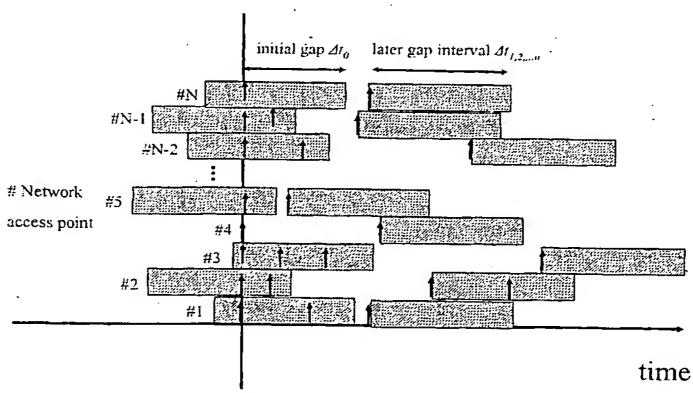
- (71) Applicant (for all designated States except US): BRITISH TELECOMMUNICATIONS PUBLIC COMPANY [GB/GB]; 81 Newgate Street, London Greater London EC1A 7AJ (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): HUNT, Rowland, Geoffrey [GB/GB]: 11 South Close, Ipswich Suffolk IP4 2TH (GB). WHITEHEAD, Martin, John [GB/GB];

Capsella, Ufford Place, Lower Ufford, Woodbridge Suffolk IP13 6DP (GB).

- (74) Agent: LOFTING, Coreena, Fiona, Anne: BT Group Legal, Intellectual Property Department, PP: C5A, BT Centre. 81 Newgate Street, London Greater London EC1A 7AJ (GB).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO; CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, F1, GB. GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH. GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES. Fl. FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,

[Continued on next page]

(54) Title: OVERLOAD CONTROL IN A COMMUNICATIONS NETWORK



(57) Abstract: An adaptive overload system for controlling the amount of traffic processed by a network access controller is described for a network access controller arranged to control a plurality of network access points. Each network access point provides traffic with access to the communications network and the system comprises determining at the network access controller if an overload condition exists, and if so, generating at least one global constraint to restrict the rate at which a network access point admits said traffic to the communications network. The controller then multicasts at least one global traffic constraint to one or more of said plurality of network access points. Each network access point receiving the global constraint then processes the global traffic constraint to determine a plurality of local constraint conditions. The receiving network access point performs the following steps to determine said local constraint conditions: determining a local predetermined gap interval to be imposed on said traffic; and determining an initial gap interval which differs from the subsequent local predetermined gap intervals, the initial gap intervals differing between each of said plurality of network access points. The initial gap intervals are determined in either a random or pseudo-random manner to ensure synchronisation effects at the network access controller which would otherwise occur in high call rate scenarios are removed.

23

BEST AVAILABLE COPY

WO 2005/084041 A2



SE. SI. SK. TR), OAPI (BF. BJ. CF. CG. CI. CM. GA. GN. GQ. GW, ML, MR, NE. SN. TD, TG).

Published:

- without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.